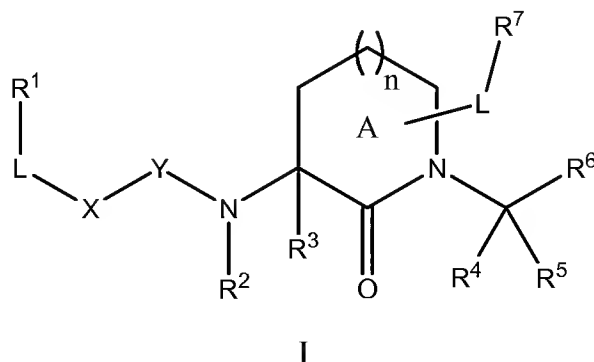


In the claims:

1. (currently amended) A compound having a structure of formula I:



or a pharmaceutically acceptable salt thereof, wherein:

$R^1$  is selected from the group consisting of H, alkyl, alkoxy, alkenyl, alkynyl, amino, alkylamino, acylamino, cyano, sulfonylamino, acyloxy, aryl, cycloalkyl, heterocyclyl, heteroaryl, and a polypeptide chain of 1 to 8 amino acid residues;

$R^2$  and  $R^3$  are independently selected from the group consisting of H, lower alkyl, cycloalkyl, and aralkyl; or  $R^2$  and  $R^3$  together with the atoms to which they are attached form a 4- to 6-membered heterocyclic ring;

$R^4$  and  $R^5$  are independently selected from the group consisting of H, halogen, and alkyl; or  $R^4$  and  $R^5$  together with the carbon to which they are attached form a 3- to 6-membered carbocyclic or heterocyclic ring;

$R^6$  is selected from the group consisting of cyano, boronic acid,  $-\text{SO}_2\text{Z}^1$ ,  $-\text{P}(=\text{O})\text{Z}^1$ ,  $-\text{C}(=\text{NH})\text{NH}_2$ , and  $-\text{CH}=\text{NR}^{12}$ ;

$R^{12}$  is selected from the group consisting of H, alkyl, alkenyl, alkynyl,  $-(\text{CH}_2)_p\text{-R}^{13}$ ,  $-(\text{CH}_2)_q\text{-OH}$ ,  $-(\text{CH}_2)_q\text{-O-alkyl}$ ,  $-(\text{CH}_2)_q\text{-O-alkenyl}$ ,  $-(\text{CH}_2)_q\text{-O-alkynyl}$ ,  $-(\text{CH}_2)_q\text{-O}-(\text{CH}_2)_p\text{-R}^{13}$ ,  $-(\text{CH}_2)_q\text{-SH}$ ,  $-(\text{CH}_2)_q\text{-S-alkyl}$ ,  $-(\text{CH}_2)_q\text{-S-alkenyl}$ ,  $-(\text{CH}_2)_q\text{-S-alkynyl}$ ,  $-(\text{CH}_2)_q\text{-S}-(\text{CH}_2)_p\text{-R}^{13}$ ,  $\text{C}(\text{O})\text{NH}_2$ ,  $-\text{C}(\text{O})\text{OR}^{14}$ , and  $\text{C}(\text{Z}^1)(\text{Z}^2)(\text{Z}^3)$ ;

$R^{13}$  is selected from the group consisting of H, alkyl, alkenyl, aryl, cycloalkyl, cycloalkenyl, and heterocyclyl;

$R^{14}$  is selected from the group consisting of H, alkyl, alkenyl, and  $LR^{13}$ ;

$Z^1$  is a halogen;

$Z^2$  and  $Z^3$  are independently selected from the group consisting of H and halogen;

p is, independently for each occurrence, an integer from 0 to 8; and

q is, independently for each occurrence, an integer from 1 to 8;

$R^7$  is absent or is one or more substituents on ring A, each of which is independently selected from the group consisting of H, lower alkyl, lower alkenyl, lower alkynyl, hydroxyl, [[oxo,]] ether, thioether, halogen, carbonyl, thiocarbonyl, amino, amido, cyano, nitro, azido, alkylamino, acylamino, aminoacyl, cyano, sulfate, sulfonate, sulfonyl, sulfonylamino, aminosulfonyl, alkoxycarbonyl, acyloxy, [[aryl,]] cycloalkyl, heterocyclyl, heteroaryl, and a polypeptide chain of 1 to 8 amino acid residues;

$R^8$  is selected from the group consisting of H, aryl, alkyl, aralkyl, cycloalkyl, heterocyclyl, heteroaryl, heteroaralkyl, and a polypeptide chain of 1 to 8 amino acid residues;

L is, independently for each occurrence, absent or is selected from the group consisting of alkyl, alkenyl, alkynyl,  $-(CH_2)_mO(CH_2)_m-$ ,  $-(CH_2)_mNR^2(CH_2)_m-$ , and  $-(CH_2)_mS(CH_2)_m-$ ;

X is absent or selected from the group consisting of  $-N(R^8)-$ ,  $-O-$ , and  $-S-$ ;

Y is absent or selected from the group consisting of  $-C(=O)-$ ,  $-C(=S)-$ , and  $-SO_2-$ ;

m is, independently for each occurrence, an integer from 0 to 10; and

n is an integer from 0 to 3.

2. **(canceled)**

3. **(currently amended)** The compound of claim 1, wherein  $R^6$  is a group of formula  $B(Y^1)(Y^2)$ , wherein  $Y^1$  and  $Y^2$  are independently OH or a group that is hydrolysable to OH; or together with the boron atom to which they are attached form a 5 to 8 membered ring that is hydrolysable to a boronic acid.

4. **(previously presented)** The compound of claim 1, wherein the compound is a protease inhibitor.

5. **(previously presented)** The inhibitor of claim 4, wherein the protease inhibitor inhibits dipeptidyl peptidase IV (DPIV) with a  $K_i$  of 50 nM or less.
6. **(previously presented)** The compound of claim 1, wherein the compound is orally active in a mammal.
7. **(previously presented)** A pharmaceutical composition, comprising a pharmaceutically acceptable carrier; and a compound of claim 1.

Claims 8-12 **(canceled)**

13. **(previously presented)** A packaged pharmaceutical, comprising a preparation of a compound of claim 1; and instructions describing the use of the preparation for inhibiting a post-proline cleaving enzyme.
14. **(previously presented)** A packaged pharmaceutical, comprising a preparation of a compound of claim 1; and instructions describing the use of the preparation for regulating glucose metabolism.

Claims 15-16 **(canceled)**